SRM Supplier: National Institute of Standards and Technology SRM Number: 3091 (Set)

Standard Reference Materials Program

MSDS Number: 3091 (Set)

MSDS Number: 3091 (Set)

100 Bureau Drive, Mail Stop 2321 SRM Name: Aroclors in Methanol Gaithersburg, Maryland 20899

Date of Issue: 23 May 2003

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The material safety data sheet for SRM 3091 consecutively consists of a set six MSDSs. This Standard Reference Material (SRM) is a set of six different solutions of individual Aroclors in methanol and consists of six 2-mL ampoules, each containing approximately 1.2 mL of each of the following SRM solutions:

SRM 3081 Aroclor 1016 in Methanol

SRM 3082 Aroclor 1232 in Methanol

SRM 3083 Aroclor 1242 in Methanol

SRM 3084 Aroclor 1248 in Methanol

SRM 3085 Aroclor 1254 in Methanol

SRM 3086 Aroclor 1260 in Methanol

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### SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/SRM 3081 Aroclor 1016 in Methanol

**Description:** SRM 3091 consists of one 2-mL ampoule of SRM 3081, containing approximately 1.2 mL of a solution of aroclor 1016 in methanol.

**Other Designations: Aroclor 1016** (PCB 1016; polychlornated biphenyl (aroclor 1016); chlorodiphenyl (41 % Cl)) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1016complex molecule12674-11-2

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

## SECTION II. HAZARDOUS INGREDIENTS

<b>Hazardous Components</b>	Nominal Concentration (%)	Exposure Limits and Toxicity Data		
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>		
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>		
		Human, Inhalation: TC <sub>LO</sub> : 86 000 mg/m <sup>3</sup>		
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg		
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg		
		Man, Oral: TD <sub>LO</sub> : 3 429 mg/kg		
		Rat, Oral: LD <sub>50</sub> : 5 628 mg/kg		
Aroclor 1016	1	ACGIH TWA: 1 μg/m³ (skin)		
		MEL TWA: 0.1 mg/m³ (skin)		
		Rat, Oral: LD <sub>50</sub> : 2300 mg/kg		
		Rat, Oral: TD <sub>LO</sub> : 21 mg/kg/21 days (intermittent)		

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<sup>\*</sup> Trade name

Methanol	Aroclor 1016		
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	<b>Appearance and Odor:</b> a clear, oily liquid; odor not available		
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule		
Density: 0.7914 g/mL	<b>Density (water = 1):</b> 1.36 to 1.37		
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 323 °C to 356 °C		
Freezing Point: -94 °C	Freezing Point: not available		
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure (@ 25°C): 0.004 mmHg		
Evaporation Rate (butyl acetate = 1): 4.6	<b>Evaporation Rate (butyl acetate = 1):</b> not available		
Viscosity (@ 20 °C): 0.59 cP	Viscosity (@ 20 °C): 71 to 81 SUS		
Water Solubility: soluble	Water Solubility: very slightly soluble		
<b>Solvent Solubility:</b> soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents	Solvent Solubility: soluble in oils, organic solvents		

**NOTE:** The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1016 solution **DO NOT** exist. The actual behavior of the solution may differ from the individual components.

## SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup Autoignition Temperature: 385 °C

Flammability Limits in Air (Volume %): UPPER: 36

**LOWER:** 6.0

Aroclor 1016

Flash Point: >141 °C Method Used: Closed Cup Autoignition Temperature: Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

**LOWER:** Not Available

**Unusual Fire and Explosion Hazards:** Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1016 is a slight fire hazard.

Extinguishing Media: Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

**Special Fire Procedures:** Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACT	IVITY DATA				
Stability:	X Stable	Unstable			
		h heat, sparks, flames, or ot contact with the skin. <b>DO</b> I			
	(Materials to Avoid): Mals, halogens, metal carbid	Methanol is incompatible with le, bases, and acids.	ı halo carbons, comb	oustible materials, r	netals,
Aroclor 1016 is in	ncompatible with oxidizing	ng materials and combustible	materials.		
See Section IV:	Unusual Fire and Explosi	on Hazards			
Hazardous Deco		icts: Thermal decomposition	on products of metl	hanol may include	toxic
Thermal decomp		clor 1016 may include acid	d halides, chlorine,	oxides of carbon	ı, and
Hazardous Poly	merization	Will Occur	Xv	Vill Not Occur	
SECTION VI. HEAL	ГН HAZARD DATA				
be fatal or cause shortness of bre kidneys. Methan PCB 1016 (Aroespecially for pestages, dark pign potent liver toxin or discomfort. Tetrachloride at thigher the chlorides	hanol is a fatal poison. The blindness. Symptoms of ath, headache, nausea, and may also cause gastroictor): PCBs show high lentachloride (Cl) <sub>5</sub> compournentation of the exposed past that can be absorbed the Chis liver toxicity of chlockhe same time. Where living content of the diphenythmest.	his material is harmful if inhate exposure may include burning to womiting. Exposure can intestinal disturbances, convulevels of bio-accumulation in indicated and above. The skin lesion cores. In the later stages, black rough the skin in hazardous a corinated biphenyls appears to ever damage is extensive, the yel compound, the more probabilities.	ing sensation, coughing cause damage to the disions, and/or nerve of the fatty tissues with one consist of small packheads and pustules amounts without improvements of the expatient may become able it is toxic. Act	bugh skin. Ingestice ing, wheezing, lary ne eyes, liver, heard damage.  th very slow metab pimples and, in the sedevelop. The PC nediately discernible are is exposure to the comatose and diute and chronic ing	rngitis, rt, and polism, initial Bs are le pain carbon e. The gestion
Medical Condit skin disorders, an		ted by Exposure: Methano	ol may affect eye dis	sorders, kidney disc	orders,
Listed as a Card	cinogen/Potential Carcin	ogen (Methanol):	<b>V</b>	NI.	
In the Internat		TP) Report on Carcinogens h on Cancer (IARC) Monogr Administration (OSHA)	Yes	No   X     X     X     X     X	
Listed as a Card	cinogen/Potential Carcin	ogen (Aroclor 1016):	₹7	N	
In the Internat		TP) Report on Carcinogens h on Cancer (IARC) Monogr Administration (OSHA)	$\begin{array}{c} \text{Yes} \\ X \\ \hline X \\ \end{array}$	No	

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

**TARGET ORGAN(S) OF ATTACK:** Methanol: central nervous system (CNS)

Aroclor 1016: liver

## SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

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## SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/SRM3082 Aroclor 1232 in Methanol

**Description:** SRM 3091 consists of one 2-mL ampoule of SRM 3082, containing approximately 1.2-mL of a solution of aroclor 1232 in methanol.

**Other Designations: Aroclor 1232** (PCB 1232; polychlornated biphenyl (aroclor 1232); chlorodiphenyl (32 % Cl)) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1232complex molecule11141-16-5

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

## SECTION II. HAZARDOUS INGREDIENTS

Hazardous Components	Nominal Concentration (%)	Exposure Limits and Toxicity Data
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 86000 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg
		Man, Oral: TD <sub>LO</sub> : 3429 mg/kg
		Rat, Oral: LD <sub>50</sub> : 5628 mg/kg
Aroclor 1232	1	NIOSH TWA: 1 μg/m³ (10 hours)
		Rat, Oral: LD <sub>50</sub> : 4470 mg/kg
		Rabbit, Skin: LD <sub>LO</sub> : 2 g/kg

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<sup>\*</sup> Trade name

Methanol	Aroclor 1232		
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	Appearance and Odor: a colorless liquid; odor not available		
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule		
<b>Density:</b> 0.7914 g/mL	<b>Density (water = 1):</b> 1.24		
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 290 °C – 325 °C		
Freezing Point: -94 °C	Freezing Point: not available		
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure (@ 20 °C): 0.004 mm Hg		
Evaporation Rate (butyl acetate = 1): 4.6	<b>Evaporation Rate (butyl acetate = 1):</b> not available		
Viscosity (@ 20 °C): 0.59 cP	Viscosity (@ 20 °C): 44 – 51 SUS		
Water Solubility: soluble	Water Solubility: very slightly soluble		
<b>Solvent Solubility:</b> soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents	<b>Solvent Solubility:</b> soluble in oils and organic solvents		

NOTE: The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1232 solution **DO NOT** exist. The actual behavior of the solution may differ from the individual components.

## SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup **Autoignition Temperature: 385 °C** 

Flammability Limits in Air (Volume %): UPPER: 36

LOWER: 6.0

Aroclor 1232

Flash Point: 238 °C Method Used: Not Available **Autoignition Temperature:** Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

LOWER: Not Available

Unusual Fire and Explosion Hazards: Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1232 is a slight fire hazard.

Extinguishing Media: Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

Special Fire Procedures: Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACTIVITY DATA	
Stability: X Stable Unstable	
<b>Conditions to Avoid:</b> Avoid contact with heat, sparks, flames, or other sour vapors or combustion by-products. Avoid contact with the skin. <b>DO NOT</b> allo sources.	
<b>Incompatibility (Materials to Avoid):</b> Methanol is incompatible with halo ca oxidizing materials, halogens, metal carbide, bases, and acids.	rbons, combustible materials, metals,
Aroclor 1232 is incompatible with acid halides, chlorine, oxides of carbon, and	halogenated compounds.
See Section IV: Unusual Fire and Explosion Hazards	
<b>Hazardous Decomposition or By-products:</b> Thermal decomposition products of carbon. Thermal decomposition products of aroclor 1232 may inclearbon, and halogenated compounds.	
Hazardous Polymerization Will Occur	X Will Not Occur
SECTION VI. HEALTH HAZARD DATA	
Route of Entry: X Inhalation X Skin	X Ingestion
Methanol: Methanol is a fatal poison. This material is harmful if inhaled or a be fatal or cause blindness. Symptoms of exposure may include burning sensa shortness of breath, headache, nausea, and vomiting. Exposure can cause d kidneys. Methanol may also cause gastrointestinal disturbances, convulsions, an PCB 1232 (Aroclor): PCBs show high levels of bio-accumulation in the fattrespecially for pentachloride (Cl) <sub>5</sub> compounds and above. The skin lesions cons stages, dark pigmentation of the exposed pores. In the later stages, blackheads potent liver toxins that can be absorbed through the skin in hazardous amounts or discomfort. This liver toxicity of chlorinated biphenyls appears to be increased through the skin in hazardous amounts or discomfort. This liver toxicity of chlorinated biphenyls appears to be increased to the same time. Where liver damage is extensive, the patient higher the chlorine content of the diphenyl compound, the more probable it is to	bsorbed through skin. Ingestion may ation, coughing, wheezing, laryngitis, lamage to the eyes, liver, heart, and and/or nerve damage.  y tissues with very slow metabolism, ist of small pimples and, in the initial and pustules develop. The PCBs are without immediately discernible pain reased if there is exposure to carbon may become comatose and die. The
<b>Medical Conditions Generally Aggravated by Exposure:</b> Methanol may at skin disorders, and allergies. Aroclor 1232 may affect liver disorders, skin disorders, skin disorders, and allergies.	
Listed as a Carcinogen/Potential Carcinogen (Methanol):  In the National Toxicology Program (NTP) Report on Carcinogens In the International Agency for Research on Cancer (IARC) Monographs	Yes No X X
By the Occupational Safety and Health Administration (OSHA)	<u>X</u>
Listed as a Carcinogen/Potential Carcinogen (Aroclor 1232):	Yes No
In the National Toxicology Program (NTP) Report on Carcinogens In the International Agency for Research on Cancer (IARC) Monographs By the Occupational Safety and Health Administration (OSHA)	X

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

TARGET ORGAN(S) OF ATTACK: Methanol: central nervous system

Aroclor 1232: liver

### SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

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## SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/3083 Aroclor 1242 in Methanol

**Description:** SRM 3091 consists of one 2-mL ampoule of SRM 3083, containing approximately 1.2 mL of a solution of aroclor 1242 in methanol.

**Other Designations: Aroclor 1242** (PCB 1242; polychlornated biphenyl (aroclor 1242); chlorodiphenyl (42 % Cl)) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1242complex molecule53469-21-9

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

## SECTION II. HAZARDOUS INGREDIENTS

<b>Hazardous Components</b>	Nominal Concentration (%)	Exposure Limits and Toxicity Data
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 86 000 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg
		Man, Oral: TD <sub>LO</sub> : 3 429 mg/kg
		Rat, Oral: LD <sub>50</sub> : 5 628 mg/kg
Aroclor 1242	1	ACGIH TWA (skin): 1 mg/m <sup>3</sup>
		OSHA TWA (skin): 1 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 10 mg/m <sup>3</sup>
		Rat, Oral: LD <sub>50</sub> : 4 250 mg/kg

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<sup>\*</sup> Trade name

Methanol	Aroclor 1242		
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	<b>Appearance and Odor:</b> a colorless to pale viscous liquid with a distinct odor		
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule		
Density: 0.7914 g/mL	<b>Density (water = 1):</b> 1.24		
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 325 °C – 366 °C		
Freezing Point: -94 °C	Freezing Point: not available		
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure (@ 20 °C): 0.001 mm Hg		
<b>Evaporation Rate (butyl acetate = 1):</b> 4.6	Evaporation Rate (butyl acetate = 1): <1.0		
Viscosity (@ 20 °C): 0.59 cP	Viscosity (@ 20 °C): 82 SUS – 92 SUS		
Water Solubility: soluble	Water Solubility: very slightly soluble		
Solvent Solubility: soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents  Solvent Solubility: soluble in oils and consolvents			

NOTE: The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1242 solution DO NOT exist. The actual behavior of the solution may differ from the individual components.

### SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup **Autoignition Temperature: 385 °C** 

Flammability Limits in Air (Volume %): UPPER: 36

> LOWER: 6.0

Aroclor 1242

Flash Point: 176 °C - 180 °C Method Used: Closed Cup Autoignition Temperature: Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

LOWER: Not Available

Unusual Fire and Explosion Hazards: Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1242 is a slight fire hazard.

**Extinguishing Media:** Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

**Special Fire Procedures:** Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACTIVITY DATA					
Stability: X Stable Unstable					
	<b>Conditions to Avoid:</b> Avoid contact with heat, sparks, flames, or other sources of ignition. Avoid inhalation of vapors or combustion by-products. Avoid contact with the skin. <b>DO NOT</b> allow the material to contaminate water sources.				
<b>Incompatibility (Materials to Avoid):</b> Methanol is incompatible with halo ca oxidizing materials, halogens, metal carbide, bases, and acids. Aroclor 124: combustible materials.					
See Section IV: Unusual Fire and Explosion Hazards					
<b>Hazardous Decomposition or Byproducts:</b> Thermal decomposition products of carbon. Thermal decomposition products of aroclor 1242 may inc carbon, and halogenated compounds.					
Hazardous Polymerization Will Occur	<u>X</u>	Will Not Occ	ur		
SECTION VI. HEALTH HAZARD DATA					
Route of Entry: X Inhalation X Skin  Methanol: Methanol is a fatal poison. This material is harmful if inhaled or a	absorbed th	X	Ingestion		
be fatal or cause blindness. Symptoms of exposure may include burning sens shortness of breath, headache, nausea, and vomiting. Exposure can cause kidneys. Methanol may also cause gastrointestinal disturbances, convulsions,	ation, coug damage to	the eyes, liver	g, laryngitis,		
PCB 1242 (Aroclor): PCBs show high levels of bio-accumulation in the fatty tissues with very slow metabolism, especially for pentachloride (Cl) <sub>5</sub> compounds and above. The skin lesions consist of small pimples and, in the initial stages, dark pigmentation of the exposed pores. In the later stages, blackheads and pustules develop. The PCBs are potent liver toxins that can be absorbed through the skin in hazardous amounts without immediately discernible pain or discomfort. This liver toxicity of chlorinated biphenyls appears to be increased if there is exposure to carbon tetrachloride at the same time. Where liver damage is extensive, the patient may become comatose and die. The higher the chlorine content of the diphenyl compound, the more probable it is toxic.					
<b>Medical Conditions Generally Aggravated by Exposure:</b> Methanol may a skin disorders, and allergies. Aroclor 1242 may affect liver disorders, skin disorders.			ey disorders,		
Listed as a Carcinogen/Potential Carcinogen (Methanol):	Yes	No			
In the National Toxicology Program (NTP) Report on Carcinogens		X			
In the International Agency for Research on Cancer (IARC) Monographs By the Occupational Safety and Health Administration (OSHA)		X X			
Listed as a Carcinogen/Potential Carcinogen (Aroclor 1242):					
	Yes	No			
In the National Toxicology Program (NTP) Report on Carcinogens In the International Agency for Research on Cancer (IARC) Monographs	$\frac{X}{X}$				
By the Occupational Safety and Health Administration (OSHA)		X			

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

**TARGET ORGAN(S) OF ATTACK:** Methanol: central nervous system (CNS)

Aroclor 1242: liver

### SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

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## SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/SRM 3084 Aroclor 1248 in Methanol

**Description:** SRM 3091 consists of one 2-mL ampoule of SRM 3084, containing approximately 1.2 mL of a solution of aroclor 1248 in methanol.

**Other Designations:** Aroclor 1248 (PCB 1248; polychlornated biphenyl (aroclor 1248); chlorodiphenyl (48 % Cl)) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1248complex molecule12672-29-6

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

#### SECTION II. HAZARDOUS INGREDIENTS

Hazardous Components	Nominal Concentration (%)	Exposure Limits and Toxicity Data
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 86 000 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg
		Man, Oral: TD <sub>LO</sub> : 3 429 mg/kg
		Rat, Oral: LD <sub>50</sub> : 5 628 mg/kg
Aroclor 1248	1	NIOSH TWA: 1 μg/m³ (10 h)
		Rat, Oral: LD <sub>50</sub> : 11 g/kg
		Rabbit, Skin: LD <sub>LO</sub> : 1 269 mg/kg

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<sup>\*</sup> Trade name

Methanol	Aroclor 1248		
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	<b>Appearance and Odor:</b> a yellow to green free flowing liquid; odor not available		
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule		
<b>Density:</b> 0.7914 g/mL	<b>Density (water = 1):</b> 1.45 to 1.47		
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 340 °C to 375 °C		
Freezing Point: -94 °C	Freezing Point: not available		
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure (@ 20 °C): negligible		
Evaporation Rate (butyl acetate = 1): 4.6	<b>Evaporation Rate (butyl acetate = 1):</b> not available		
Viscosity (@ 20 °C): 0.59 cP	Viscosity (@ 20 °C): 185 SUS to 240 SUS		
Water Solubility: soluble	Water Solubility: very slightly soluble		
<b>Solvent Solubility:</b> soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents	Solvent Solubility: soluble in oils and organic solvents		

NOTE: The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1248 solution **DO NOT** exist. The actual behavior of the solution may differ from the individual components.

## SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup **Autoignition Temperature: 385 °C** 

Flammability Limits in Air (Volume %): UPPER: 36

LOWER: 6.0

Aroclor 1248

Flash Point: < 340 °C Method Used: Not Available Autoignition Temperature: Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

LOWER: Not Available

Unusual Fire and Explosion Hazards: Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1248 is a slight fire hazard.

Extinguishing Media: Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

Special Fire Procedures: Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACTIVITY DATA			
Stability: X Stable Unstable			
<b>Conditions to Avoid:</b> Avoid contact with heat, sparks, flames, or other source vapors or combustion by-products. Avoid contact with the skin. <b>DO NOT</b> allo sources.			
<b>Incompatibility (Materials to Avoid):</b> Methanol is incompatible with halo car oxidizing materials, halogens, metal carbide, bases, and acids. Aroclor 1248 combustible materials.			
See Section IV: Unusual Fire and Explosion Hazards			
<b>Hazardous Decomposition or By-products:</b> Thermal decomposition products of carbon. Thermal decomposition products of aroclor 1248 may include carbon, and halogenated compounds.			
Hazardous Polymerization Will Occur	X W	ill Not Occu	r
SECTION VI. HEALTH HAZARD DATA			
Route of Entry: X Inhalation X Skin		X	Ingestion
<b>Methanol:</b> Methanol is a fatal poison. This material is harmful if inhaled or all be fatal or cause blindness. Symptoms of exposure may include burning sensal shortness of breath, headache, nausea, and vomiting. Exposure can cause diskidneys. Methanol may also cause gastrointestinal disturbances, convulsions, a	tion, coughin amage to the	ng, wheezing e eyes, liver,	, laryngitis,
PCB 1248 (Aroclor): PCBs show high levels of bio-accumulation in the fatty especially for pentachloride (Cl) <sub>5</sub> compounds and above. The skin lesions constages, dark pigmentation of the exposed pores. In the later stages, blackheads potent liver toxins that can be absorbed through the skin in hazardous amounts or discomfort. This liver toxicity of chlorinated biphenyls appears to be incretetrachloride at the same time. Where liver damage is extensive, the patient higher the chlorine content of the diphenyl compound, the more probable it is to	ist of small pi and pustules without imme eased if there may become	imples and, in develop. The diately discessed in exposure	n the initial e PCBs are ernible pain e to carbon
Medical Conditions Generally Aggravated by Exposure: Methanol may as skin disorders, and allergies. Aroclor 1248 may affect liver disorders, skin disorders.			y disorders,
Listed as a Carcinogen/Potential Carcinogen (Methanol):	Yes	No	
In the National Toxicology Program (NTP) Report on Carcinogens		X	
In the International Agency for Research on Cancer (IARC) Monographs By the Occupational Safety and Health Administration (OSHA)		X	
Listed as a Carcinogen/Potential Carcinogen (Aroclor 1248):			
In the National Toxicology Program (NTP) Report on Carcinogens	Yes X	No	
In the International Agency for Research on Cancer (IARC) Monographs	X		
By the Occupational Safety and Health Administration (OSHA)		X	

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

**TARGET ORGAN(S) OF ATTACK:** Methanol: central nervous system (CNS)

Aroclor 1248: liver

## SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

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### SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/SRM 3085 Aroclor 1254 in Methanol

**Description:** SRM 3091 consists of one 2 mL ampoule of SRM 3085, containing approximately 1.2 mL of a solution of aroclor 1254 in methanol.

**Other Designations: Aroclor 1254** (PCB 1254; polychlornated biphenyl (aroclor 1254); chlorodiphenyl (54 % Cl)) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1254complex molecule11097-69-1

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

## SECTION II. HAZARDOUS INGREDIENTS

Hazardous Components	Nominal Concentration (%)	Exposure Limits and Toxicity Data	
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>	
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>	
		Human, Inhalation: TC <sub>LO</sub> : 86 000 mg/m <sup>3</sup>	
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg	
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg	
		Man, Oral: TD <sub>LO</sub> : 3 429 mg/kg	
		Rat, Oral: LD <sub>50</sub> : 5 628 mg/kg	
Aroclor 1254	1	ACGIH TWA: 0.5 mg/m <sup>3</sup> (skin)	
		OSHA TWA: 0.5 mg/m³ (skin)	
		Rat, Oral: LD <sub>50</sub> : 1 010 mg/kg	
		Rat, Intravenous: LD <sub>50</sub> : 358 mg/kg	

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<sup>\*</sup> Trade name

Methanol	Aroclor 1254
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	<b>Appearance and Odor:</b> a colorless to yellow liquid with a distinct odor
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule
<b>Density:</b> 0.7914 g/mL	<b>Density (water = 1):</b> 1.50
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 365 °C – 390 °C
Freezing Point: -94 °C	Freezing Point: 10 °C
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure: negligible
Evaporation Rate (butyl acetate = 1): 4.6	Evaporation Rate (butyl acetate = 1): not available
Viscosity (@ 20 °C): 0.59 cP	Viscosity (@ 20 °C): 140 – 2500 SUS
Water Solubility: soluble	Water Solubility: very slightly soluble
<b>Solvent Solubility:</b> soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents	Solvent Solubility: soluble in oils, organic solvents

**NOTE:** The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1254 solution **DO NOT** exist. The actual behavior of the solution may differ from the individual components.

## SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup Autoignition Temperature: 385 °C

Flammability Limits in Air (Volume %): UPPER: 36

**LOWER:** 6.0

Aroclor 1254

Flash Point: 222 °C Method Used: Closed Cup Autoignition Temperature: Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

**LOWER:** Not Available

**Unusual Fire and Explosion Hazards:** Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1254 is a slight fire hazard.

Extinguishing Media: Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

**Special Fire Procedures:** Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACTIVITY DATA			
Stability: X Stable	Unstable		
<b>Conditions to Avoid:</b> Avoid contact with h vapors or combustion by-products. Avoid co-sources.			
<b>Incompatibility (Materials to Avoid):</b> Methoxidizing materials, halogens, metal carbide, but the control of th		ons, combustible materials, metal	ls,
Aroclor 1254 is incompatible with acid halide	s, chlorine, oxides of carbon, and ha	logenated compounds.	
See Section IV: Unusual Fire and Explosion	Hazards		
Hazardous Decomposition or By-products oxides of carbon. Thermal decomposition procarbon, and halogenated compounds.	roducts of aroclor 1254 may includ	le acid halides, chlorine, oxides	
Hazardous Polymerization	_ Will Occur	X Will Not Occur	
SECTION VI. HEALTH HAZARD DATA			
Route of Entry: X Inhalation	X Skin	X Ingestion	
<b>Methanol:</b> Methanol is a fatal poison. This be fatal or cause blindness. Symptoms of ex shortness of breath, headache, nausea, and kidneys. Methanol may also cause gastrointe	posure may include burning sensation vomiting. Exposure can cause dark	on, coughing, wheezing, laryngiti mage to the eyes, liver, heart, ar	is,
PCB 1254 (Aroclor): PCBs show high lever especially for pentachloride (Cl) <sub>5</sub> compound initialstages, dark pigmentation of the expose PCBs are potent liver toxins that can be abligated as a discernible pain or discomfort. This liver exposure to carbon tetrachloride at the same comatose and die. The higher the chlorine cound chronic ingestion studies of aroclor 1254, loss, and deaths.	ds and above. The skin lesions co sed pores. In the later stages, black psorbed through the skin in hazard toxicity of chlorinated biphenyls a ne time. Where liver damage is e- content of the diphenyl compound, th	nsist of small pimples and, in the cheads and pustules develop. The ous amounts without immediate ppears to be increased if there attensive, the patient may become more probable it is toxic. Acu	he he ely is me
Medical Conditions Generally Aggravated skin disorders, and allergies.	by Exposure: Methanol may affe	ect eye disorders, kidney disorder	rs,
Listed as a Carcinogen/Potential Carcinoge	n (Methanol):	Yes No	
In the National Toxicology Program (NTP) In the International Agency for Research of By the Occupational Safety and Health Adi	n Cancer (IARC) Monographs	X X	
Listed as a Carcinogen/Potential Carcinoge	en (Aroclor 1254):	<b>N N</b>	
In the National Toxicology Program (NTP) In the International Agency for Research of By the Occupational Safety and Health Ade	n Cancer (IARC) Monographs	Yes No  X X X X X	

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

TARGET ORGAN(S) OF ATTACK: Methanol: central nervous system

Aroclor 1254: liver

## SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

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### SECTION I. MATERIAL IDENTIFICATION

Material Name: SRM 3091/SRM 3086 Aroclor 1260 in Methanol

**Description:** SRM 3091 consists of one 2-mL ampoule of SRM 3086, containing approximately 1.2 mL of a solution of aroclor 1260 in methanol.

**Other Designations: Aroclor 1260** (PCB 1260; polychlornated biphenyl (aroclor 1260); chlorodiphenyl (60 % Cl) in **Methanol** (methyl alcohol; wood alcohol; methyl hydroxide; carbinol; monohydroxymethane; wood spirit; wood naphtha; methylol; *Colonial Spirit\**; *Columbian Spirit\**; *Pyroxylic Spirit\**)

NameChemical FormulaCAS Registry NumberMethanolCH3OH67-56-1Aroclor 1260complex molecule11096-82-5

**DOT Classification:** Methanol, UN1230 (Small Quantity Exemption)

Manufacturer/Supplier: Available from a number of suppliers

### SECTION II. HAZARDOUS INGREDIENTS

<b>Hazardous Components</b>	Nominal Concentration (%)	Exposure Limits and Toxicity Data
Methanol	99	ACGIH TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		OSHA TLV-TWA (skin): 200 mg/kg or 262 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 86 000 mg/m <sup>3</sup>
		Human, Inhalation: TC <sub>LO</sub> : 300 mg/kg
		Human, Oral: LD <sub>LO</sub> : 143 mg/kg
		Man, Oral: TD <sub>LO</sub> : 3429 mg/kg
		Rat, Oral: LD <sub>50</sub> : 5628 mg/kg
Aroclor 1260	1	NIOSH TWA: 1 μg/m³ (10 hours)
		Rat, Oral: LD <sub>50</sub> : 1315 mg/kg
		Rabbit, Skin: LD <sub>LO</sub> : 2 g/kg

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<sup>\*</sup> Trade name

Methanol	Aroclor 1260	
Appearance and Odor: a clear, colorless liquid with a characteristic alcoholic odor	Appearance and Odor: a yellow solid; odor not available	
Relative Molecular Mass: 32.04	Relative Molecular Mass: complex molecule	
<b>Density:</b> 0.7914 g/mL	<b>Density (water = 1):</b> 1.58	
<b>Boiling Point:</b> 65 °C	<b>Boiling Point:</b> 385 °C – 420 °C	
Freezing Point: -94 °C	Freezing Point: not available	
Vapor Pressure (@ 20 °C): 97.25 mm Hg	Vapor Pressure (@ 20 °C): negligible	
<b>Evaporation Rate (butyl acetate = 1):</b> 4.6	Evaporation Rate: not available	
Viscosity (@ 20 °C): 0.59 cP	Viscosity: not applicable	
Water Solubility: soluble	Water Solubility: very slightly soluble	
<b>Solvent Solubility:</b> soluble in ether, benzene, alcohol, acetone, chloroform, ethanol, ketones, and most other organic solvents	Solvent Solubility: soluble in oils and organic solvents	

NOTE: The physical and chemical data provided are for the pure components. Physical and chemical data for this methanol/aroclor 1260 solution DO NOT exist. The actual behavior of the solution may differ from the individual components.

## SECTION IV. FIRE AND EXPLOSION HAZARD DATA

Methanol

Flash Point: 11 °C Method Used: Closed Cup **Autoignition Temperature: 385 °C** 

Flammability Limits in Air (Volume %): UPPER: 36

LOWER: 6.0

Aroclor 1260

Flash Point: >385 °C Method Used: Not Available **Autoignition Temperature:** Not Available

Flammability Limits in Air (Volume %): UPPER: Not Available

LOWER: Not Available

Unusual Fire and Explosion Hazards: Methanol is a severe fire and explosion hazard when exposed to heat or flame. Vapors are heavier than air and may travel a considerable distance to a source of ignition and flash back. Vapor and air mixtures are explosive.

Aroclor 1260 is a slight fire hazard.

Extinguishing Media: Use alcohol-resistant foam, dry chemical, carbon dioxide, or water spray.

Special Fire Procedures: Fire fighters should wear a self-contained breathing apparatus (SCBA) with a full face piece in the pressure demand or positive mode and other protective clothing.

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SECTION V. REACT	IVITY DATA				
Stability:	X Stable	Unstable			
	<b>void:</b> Avoid contact with stion by-products. Avoid c				
oxidizing materia	(Materials to Avoid): Metals, halogens, metal carbide,	bases, and acids.		astible materials, metals	S,
Aroclor 1260 is in	ncompatible with oxidizing	materials and combustible	materials.		
See Section IV:	Unusual Fire and Explosion	n Hazards			
Hazardous Deco	omposition or Byproduct	s: Thermal decompositi	on products of metha	anol may include toxi	c
Thermal decomp halogenated comp	position products of arocle pounds.	or 1260 may include ac	id halides, chlorine,	oxides of carbon, an	d
Hazardous Poly	merization	Will Occur	X W	ill Not Occur	
SECTION VI. HEALT	ГН HAZARD DATA				
Route of Entry:	X Inhalatio	n <u>X</u> SI	kin	X Ingestion	
be fatal or cause shortness of brea	hanol is a fatal poison. This blindness. Symptoms of e ath, headache, nausea, and nol may also cause gastroint	xposure may include burn vomiting. Exposure car	ing sensation, coughing cause damage to the	ng, wheezing, laryngitis e eyes, liver, heart, an	s,
especially for per stages, dark pign potent liver toxin or discomfort. The tetrachloride at t	clor): PCBs show high leventachloride (Cl) <sub>5</sub> compound nentation of the exposed points that can be absorbed through liver toxicity of chloriches ame time. Where live ne content of the diphenyl c	s and above. The skin less res. In the later stages, bla ugh the skin in hazardous nated biphenyls appears to r damage is extensive, the	ions consist of small p ackheads and pustules amounts without imme to be increased if ther e patient may become	simples and, in the initial develop. The PCBs are diately discernible paire is exposure to carbo	al re n n
Medical Condit skin disorders, an	ions Generally Aggravate	d by Exposure: Methano	ol may affect eye disc	orders, kidney disorders	S,
Aroclor 1260 ma	ay affect liver disorders, skii	n disorders, and allergies.			
Listed as a Carc	inogen/Potential Carcinog	gen (Methanol):	Yes	No	
In the Internati	l Toxicology Program (NTF ional Agency for Research o ational Safety and Health Ad	on Cancer (IARC) Monog		X X X	
Listed as a Carc	inogen/Potential Carcinog	gen (Aroclor 1260):			
In the Internati	l Toxicology Program (NTF ional Agency for Research o ational Safety and Health Ad	on Cancer (IARC) Monog	raphs $\begin{array}{c} Yes \\ X \\ \hline X \\ \end{array}$	No	

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**Skin Contact:** Remove contaminated shoes and clothing. Rinse affected area with large amounts of water followed by washing the area with soap and water. Watch for chemical irritations and treat them accordingly. Obtain medical assistance if necessary.

**Eye Contact:** Immediately flush eyes, including under the eyelids, with copious amounts of water for at least 15 minutes. Obtain medical assistance.

**Inhalation:** If inhaled, move the victim to fresh air. If breathing is difficult, give oxygen; if the victim is not breathing, give artificial respiration. Obtain medical assistance if necessary.

**Ingestion:** If ingested, wash out mouth with water. Obtain medical assistance immediately.

TARGET ORGAN(S) OF ATTACK: Methanol: central nervous system

Aroclor 1260: liver

### SECTION VII. PRECAUTIONS FOR SAFE HANDLING AND USE

**Steps to be Taken in Case Material Is Released or Spilled:** Notify safety personnel of major spills and/or leaks. Evacuate nonessential personnel. Absorb small spills with sand or other absorbent material and place into containers for disposal. **DO NOT** flush into a sewer. Keep out of watersheds and waterways.

Waste Disposal: Follow all federal, state, and local laws governing disposal.

**Handling and Storage:** Persons handling this material must wear protective eyewear, clothing, and gloves to prevent contact with this material.

**NOTE:** Contact lenses pose a special problem; soft lenses may absorb irritants and all lenses concentrate them. **DO NOT** wear contact lenses in the laboratory.

Protect containers from physical damage. Sealed ampoules, as received, should be stored in the dark at temperatures lower than 30 °C. Keep material in a well-ventilated area away from incompatible materials.

### SECTION VIII. SOURCE DATA/OTHER COMMENTS

**Sources:** MDL Information Systems, Inc., MSDS *Methyl Alcohol*, 19 June 2001.

MDL Information Systems, Inc., MSDS Aroclor 1016, 17 June 2002.

MDL Information Systems, Inc., MSDS Aroclor 1232, 22 March 2001.

MDL Information Systems, Inc., MSDS *Aroclor* 1242, 22 March 2001.

MDL Information Systems, Inc., MSDS Aroclor 1248, 22 March 2001.

MDL Information Systems, Inc., MSDS Aroctor 1254, 22 March 2001.

MDL Information Systems, Inc., MSDS Aroclor 1260, 16 December 2002.

Merck Index, 11th Ed., 1989.

The Sigma Aldrich Library of Chemical Safety Data, Ed. II, 1988.

**Disclaimer:** Physical and chemical data contained in this MSDS are provided only for use in assessing the hazardous nature of the material. The MSDS was prepared carefully, using current references; however, NIST does not certify the data on the MSDS. The certified value for this material is given in the NIST Certificate of Analysis.

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